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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,884	10/31/2003	Richard A. Haight	YOR9-2000-0571-US2	2010

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EXAMINER

PADGETT, MARIANNE L

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/698,884

Applicant(s)

HAIGHT ET AL.

Examiner

Marianne L. Padgett

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1762

1. Applicant's amendments (11/8/04) to the claims have corrected the 112 problems in claim 10, and those to the specification corrected the objection to the specification.

2. The Terminal disclaimer of 11/8/04 has been approved and thus overcome the obviousness double patenting rejection over USPN 6,656,539.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8-14 and 20-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polanyi et al (6,314,566), alone in view of Morishige (4,711,790), as applied in section 6 of the action mailed 7/29/04.

On page 9 of their response, applicants discuss Polanyi et al, and state, "Polanyi does not teach this claim limitation" in the beginning of the paragraph bridging p. 9-10. While its not clear exactly what limitation applicants are alleging is not taught, the following discussion seem to be implying that gas is not used in Polanyi et al's deposition. As can be seen on col. 3, lines 48-52, use of gaseous precursors to form the absorbate film on the surface is explicitly taught, so these arguments are not convincing. The arguments might also be trying to rely on implied are not positively claimed limitations. Applicants' claim 1 as written only requires irradiation to be applied to the deposited film to cause photodissociation in the film, and Polanyi et al's dissociation occurs in the adlayer, i.e. in the film not the gas, hence meeting requirements of the claims as a whole as written. Note if "gas-phase dissociation by irradiation was negligible" as

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Art Unit: 1762

taught in col. 10, lines 29-32, then “the intensity...” is clearly “insufficient to cause significant photolytic breakdown of molecules...in the...gas” as claimed. Semantics arguments are not convincing, and only positively claimed limitations are necessitated. Applicants’ claims and Polanyi et al are equivalent in stating that dissociation occurs in the deposited film (whether its ever patterned or not is irrelevant in the claims), and that it is negligible or insignificant in the gas phase. Note that if the dissociation does not occur, the intensity of the light is clearly inherently insufficient to cause it to, and a reference need not explicitly say so in the same words. There may also be other reasons way it does not occur, but regardless of them, this negative requirement is met. Polanyi et al as previously discussed may deposit material from gas that is photodissociated in the “adlayer.” That they do not call it a “donor compound” is totally irrelevant, as there is not any determinable difference between applicant’s word choice and Polanyi et al taught concept. Again, semantics arguments are not convincing. As to use of carrier gas, this difference and its obviousness was discussed in the rejection of 7/29/04. Applicants implications that a CVD process that uses a carrier gas does not suspend its precursors (donor compounds) in the carrier is again a semantics argument, as the state of the donor compound as claimed is unspecified, hence inclusive of gases, so applicants’ argument remain unconvincing, as any gas is clearly suspended therein. Applicants have provide no convincing reasons why the use of a carrier gas in Polanyi et al would not have been obvious as discussed by the examiner, especially considering that Morishige shows that specific gas or compounds contemplated for use in the primary reference are known to be transported via a carrier gas as claimed.

Art Unit: 1762

5. Claims 23-24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polanyi et al, optionally in view of Morishige as applied to claims 1-6, 8-14 and 20-22 above, and further in view of Trushin et al ("Femtosecond Dynamics...") as discussed in section 7 of the 7/29/04 action.

Applicants seem to be arguing, without actually stating it, that Trushin et al destroys some intent or purpose of Polanyi et al, however it is unclear how Trushin et al's discussion of the Femtosec dynamics of $\text{Cr}(\text{CO})_6$ by UV decomposition, which relates to both the irradiation and the compound used in Polanyi is contrary to any teachings therein, hence these arguments are unconvincing.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Polanyi et al, optionally in view of Morishige as applied to claims 1-6, 8-14 and 20-22 above, and further in view of Baum et al (5,407,710), and optionally Baum (5,686,206) as applied in section 8 of the paper of 7/29/04.

As applicant's arguments against this rejection rely on their preceding discussion of Polanyi, optionally combined with Morishige, they are not convincing.

7. Applicant's arguments filed 11/8/04 and discussed above have been fully considered but they are not persuasive.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 1762

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday about 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. 5. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. L. Padgett/af
January 31 2005
March 24, 2005



MARIANNE PADGETT
PRIMARY EXAMINER